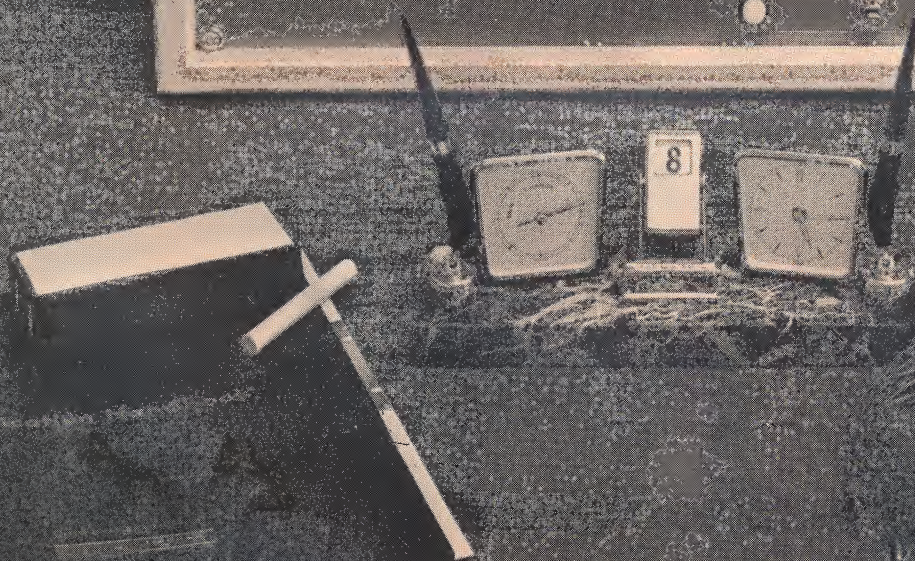
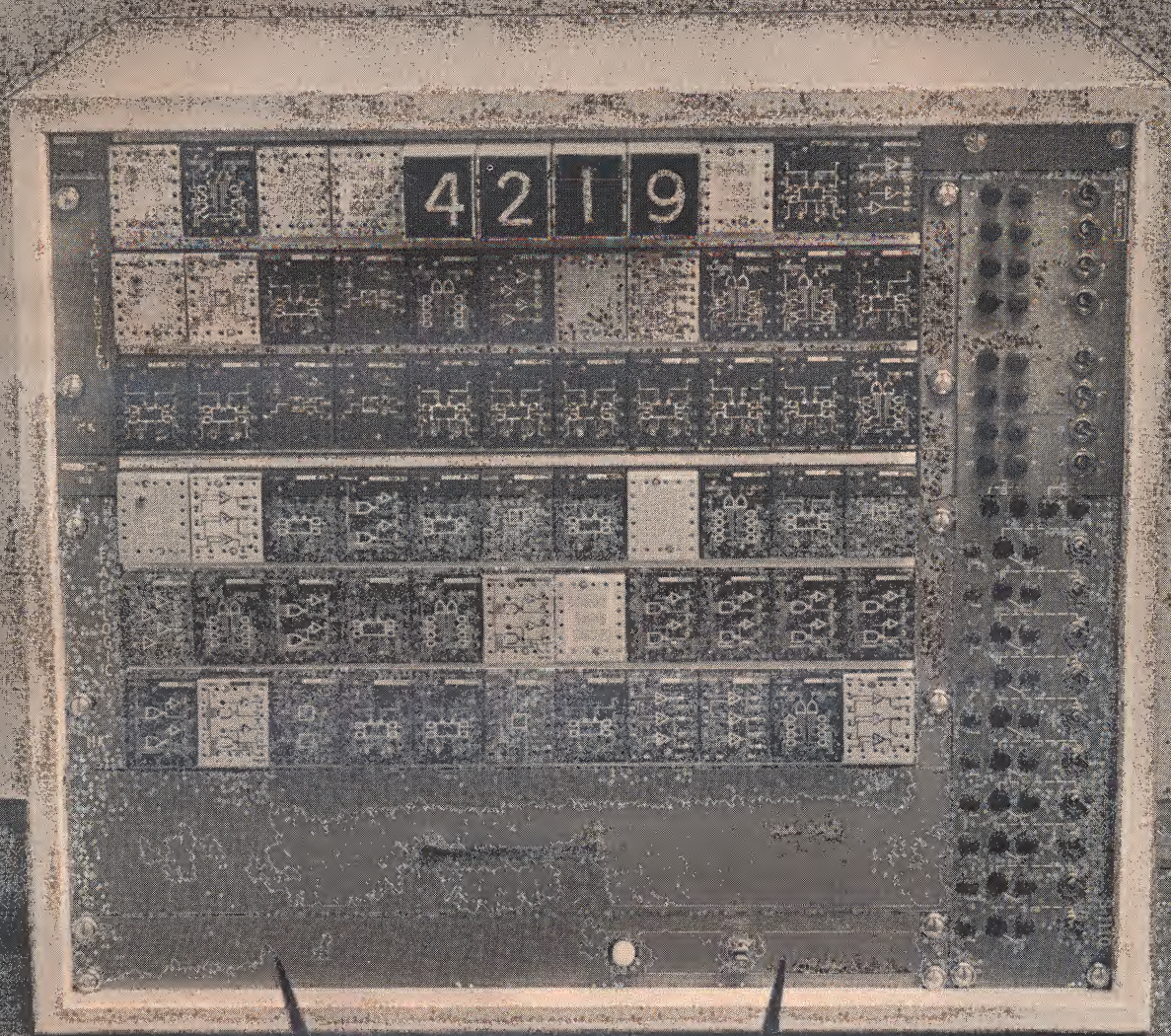


THE ROBACK CORPORATION

H-K MODULE DIVISION



NEW IMPROVED ROBACK
FACILOGIC®
DIGITAL LOGIC for BREADBOARDING

THE FACILOGIC® CONCEPT

FASTER THAN A BLACKBOARD

The design of digital systems has come a long way from the day of scratchpaper doodling (or the carefully drawn schematic—with hidden flaws necessitating endless debugging). The ability of the digital engineer to test his circuitry concept, on a prototype design, at the very moment of creation, is now a reality. Breadboarding has been given a new and strengthened role in the art of electronic pioneering with the introduction of The Roback FACILOGIC®.

TIME-SAVING—CONVENIENT

With a series of uniquely designed modules, the engineer, designer, instructor, quality control manager or logic technician is now provided with a powerful tool for problem-solving with tremendous time-saving and convenience advantages. The engineer has been provided with a flexible and integrated group of specifically designed digital logic components—from stock—to economically satisfy his requirements at every level of need: breadboarding, proposal preparation, design, checkout and final construction.

IN ACTIVE USE

The Facilogic® system today is in active use in such leading facilities as the U.S. Department of Commerce, Remington Rand Univac, Eastman Kodak, Space Technology Laboratories, Sanders Associates, and at such institutions as the University of California, Utah State College and Ohio State College.



EXPERIMENTATION AND EDUCATION

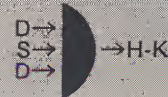
From these experimental and design centers, numerous digital logic innovations have been developed and incorporated into missile guidance systems, measuring devices, various instruments and aircraft checkout equipment. The use of FACILOGIC® to educate new generations of electrical engineers into the by-paths of digital logic theory has become a standard classroom and lecture hall procedure in schools and at production centers.

RAPID PRODUCTION

Once a system is breadboard-approved, its conversion to actual digital logic production circuitry has been simplified by the availability of low-cost H-K encapsulated modules and the H-K Flexi-card® system which allows module/card groupings in over 100,000 combinations.



All standard digital logic modules, NAND, NOR, AND and OR logic, are available, and correspond directly to The Roback Corp. encapsulated digital logic modules. Active logic circuits, such as NAND and NOR circuits, include both direct and complementary outputs within the same module. A NAND circuit, for example, also offers the AND configuration simultaneously. Blank modules, with internal mounting boards, are available for customer construction and integration of special circuits. The circuit designs utilized are rated for conservative operation over the temperature range of $+20^{\circ}\text{C}$ to $+55^{\circ}\text{C}$.



A MOST UNUSUAL OFFER BEHIND THIS MOST UNUSUAL PRODUCT

LEASE: For economy, nothing can beat the H-K Facilogic leasing program. Any reasonable Facilogic assortment can be yours for a nominal 2-month leasing charge of 15%, and 5% per month thereafter. Naturally, the lease charge may be applied to outright purchase, also. Full details on this program are yours for the asking. Many of our customers have utilized this lease program as a means of obtaining equipment, for use on a specific contract, without capital outlay.

Facilogic demonstrator units are also available, from the factory, for in-plant trial, for a short **TRIAL LOAN:** Because of the unique advantages of the FACILOGIC® concept, The ROBACK CORP. will make available, upon request, a typical FACILOGIC system on a No-Charge, 30-Day Loan basis (except transportation costs), under a reservation system now in effect. You may arrange for this loan with your local representative.

May we warn you in advance. You won't give it up!

UNIQUE DESIGN CONVENIENCES SPEED CONCEPT-TO-TRIAL TIME

17 Performance Features Simplify Breadboarding and Insure Rapid Production Transfer

Power connections are made automatically as each module is plugged into the FACILOGIC® frame.

Logic diagrams for each module function, conforming to applicable MIL specs, are silk screened on the front of each module.

The availability of FRONT and REAR interwiring connections results in "No-Maze" wiring. Standard laboratory pin jacks, available in every laboratory, are used for interconnection. In addition, stacking type pin-jack color-coded interconnection leads of 4" to 24" lengths are available as accessories.

Built-in indicator lights on every module, used for logical operations, indicate the logical state of the circuit.

Each module is individually colored to permit rapid identification and organization of logical functions. Red: Emitter Followers and Power Drivers. Black: NAND Gates, NOR Gates, and Pulse Gates. Green: Flip-Flops. Yellow: Push-buttons, Matrices, and blank units.

The FACILOGIC® mounting frame provides space for writing in of notes opposite each module location.

Each module contains a maximum of built-in short circuit protection.

The standard Roback power supply, PS832, provides power to operate up to 100 modules including drive for all front panel indicator lamps.

Unclamped circuits are used throughout to minimize the possibility of short circuit damage.

Conventional NAND, NOR, AND and OR logic is available, corresponding directly to the Roback encapsulated digital logic modules. Thus, a system may be breadboarded using the FACILOGIC series, and later constructed of encapsulated logic, utilizing FLEXI-CARDS®, after system debugging, with no concern for loading or timing problems.

Active logic circuits, such as NAND and NOR circuits, include both direct and complementary outputs within the circuit module. A NAND circuit, for example, also offers the AND configuration simultaneously.

Blank modules are available for customer construction and integration of special circuits.

Simplified loading rules, indicated by a number in a circle, are shown on each module, adjacent to the corresponding output lead.

Circuit designs utilized are rated for conservative operation at temperatures from $+20^{\circ}\text{C}$ to $+55^{\circ}\text{C}$.

FACILOGIC® modules utilize a rugged delrin case, with permanent color qualities, and are completely repairable.

The FACILOGIC® kits and other groupings of modules are available on a lease-loan arrangement. The total leasing charge paid may, at any time during the period of the lease, be applied against the purchase of the equipment.

FACILOGIC K-6000 STARTER ... \$1075.00

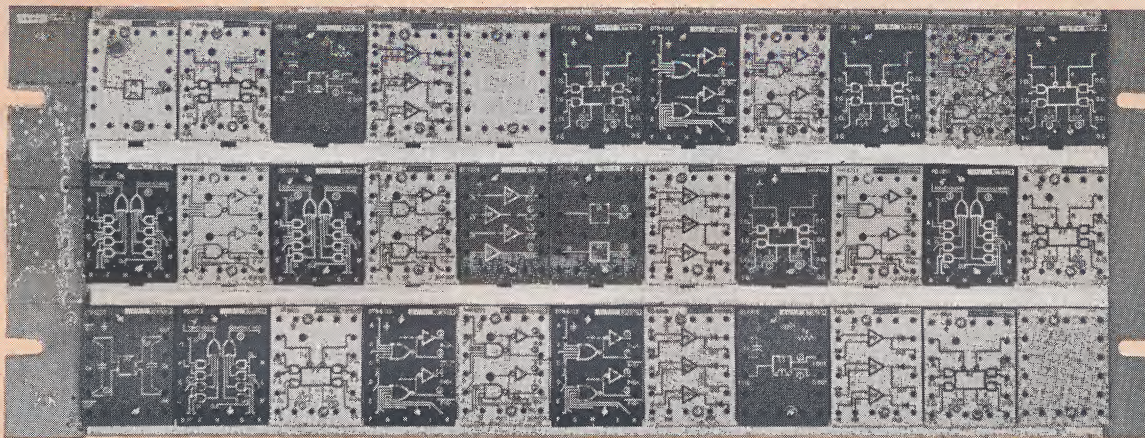
This basic module assortment has been specifically organized for immediate insertion into a standard 19-inch relay rack, in a 7-inch height. Its 33 modules are plugged directly into the mounting frame, pre-wired for automatic connection of all power and ground

lines. An assortment of piggy-back leads makes it possible to immediately test numerous concepts once power has been obtained from a 12 volt source.

Additional modules may be obtained for use at any later date.

The K-6000 Starter Kit contains the following items:

1	XM-6201	Blank Module	(Yellow)	4	PG-6256	Dual Pulse Gate	(Black)
1	MV-6210	Clock Multivibrator	(Red)	3	DTN-6213	Dual Nor/Or Gate	(Black)
2	OS-6215	One Shot Multivibrator	(Red)	4	PD-6240	Triple Power Driver	(Red)
1	RM-6241	BCD/DEC Converter Matrix	(Yellow)	1	PB-6253	Pushbutton Pulse Generator	(Yellow)
4	FF-6203	Flip Flop	(Green)	1	R-1102	Mounting Frame	
4	FF-6403	Flip Flop 5 Mc	(Green)	12	1572-4	4" "Piggyback" Test Leads	(Blue)
6	MM-6211	Dual Nand/And Gate	(Black)	15	1572-8	8" "Piggyback" Test Leads	(Yellow)
1	EF-6224	Quadruple Comp. Emitter Follower	(Red)	15	1572-12	12" "Piggyback" Test Leads	(Brown)
1	ST-6252	Dual Schmitt Trigger	(Red)	8	1572-24	24" "Piggyback" Test Leads	(Grey)



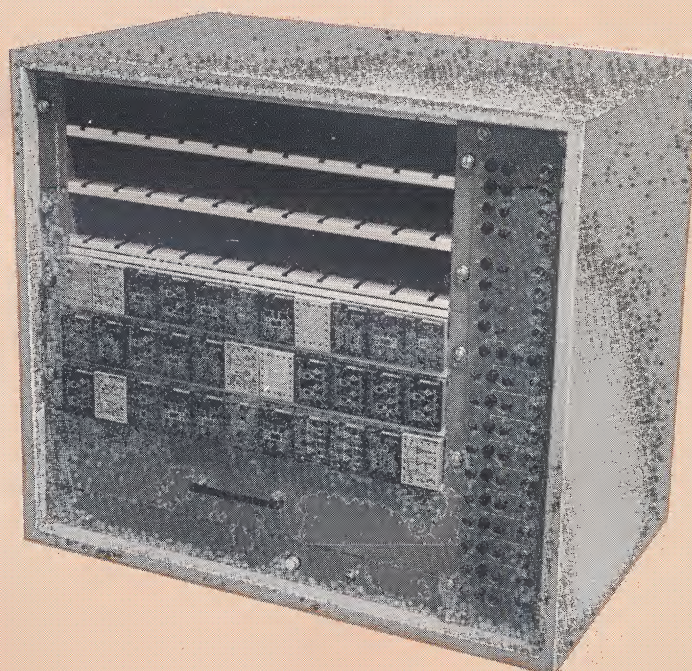
KIT PRICES INCLUDE A SUBSTANTIAL DISCOUNT — No Substitutions, Please

FACILOGIC LABORATORY KIT K-6001 ... \$1750.00

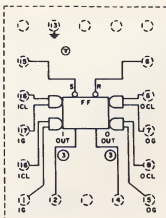
Here is the complete free-standing FACILOGIC® WORK CENTER ready for the lab bench, the lecturer's table or the classroom desk. This kit consists of a metal console, which includes an 18-switch panel, power supply, and provision for extension of the basic 33 modules up to a 66 module system. As in the K-6000, the mounting frame has been pre-wired so that insertion of any module automatically connects all power and ground lines. The ease with which these systems may be expanded make the K-6001 and K-6401 outstanding tools for logic engineers and instructors.

The LABORATORY KITS contain the following items:

K-6401	K-6001		
1 R-1105	1 R-1105	Bench Cabinet	
1 S-1110	1 S-1110	18 Switch Panel	
1 PS-832	1 PS-832	Power Supply	
2 R-1102	2 R-1102	Mounting Frame	
1 XM-6201	1 XM-6201	Blank Module	(Yellow)
1 MV-6410	1 MV-6210	Clock Multivibrator	(Red)
2 OS-6415	2 OS-6215	One Shot Multivibrator	(Red)
1 RM-6241	1 RM-6241	BCD/DEC Converter Matrix	(Yellow)
	4 FF-6203	Flip Flop	(Green)
8 FF-6403	4 FF-6403	Flip Flop 5 Mc	(Green)
4 MM-6411	6 MM-6211	Dual Nand/And Gate	(Black)
2 EF-6424	1 EF-6224	Quadruple Comp. Emitter Follower	(Red)
1 ST-6452	1 ST-6252	Dual Schmitt Trigger	(Red)
3 PG-6456	4 PG-6256	Dual Pulse Gate	(Black)
5 DTN-6413	3 DTN-6213	Dual Nor/Or Gate	(Black)
4 PD-6240	4 PD-6240	Triple Power Driver	(Red)
1 PB-6253	1 PB-6253	Pushbutton Pulse Generator	(Yellow)
12 1572-4	12 1572-4	4" "Piggyback" Test Leads	(Blue)
15 1572-8	15 1572-8	8" "Piggyback" Test Leads	(Yellow)
15 1572-12	15 1572-12	12" "Piggyback" Test Leads	(Brown)
8 1572-24	8 1572-24	24" "Piggyback" Test Leads	(Grey)



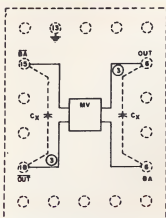
FACILOGIC 5 MC KIT K-6401 ... \$2,000.00



FLIP FLOP

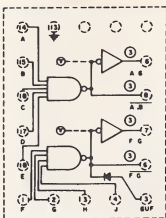
FF 6203—250Kc: \$27.00
FF 6403— 5Mc: \$35.00

The Facilogic Flip-Flop has provision for both DC Set and Reset inputs, as well as dual gated clock inputs to both the "1" and "0" sides of the Flip-Flops. Complementary "0" and "1" outputs are available simultaneously. This unit is useful for any application involving storage, counting, or shifting.



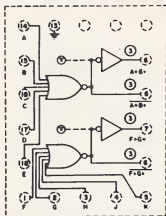
CLOCK MULTIVIBRATOR MV 6210—250Kc: \$15.00
MV 6410— 5Mc: \$22.00

The fundamental frequency of the MV 6210 is established by self-contained capacitors at nominally 200Kc (5Mc for MV 6410). External connections are provided to allow for the addition of paralleling capacitors, to provide for operation down to any desired low frequency limit.



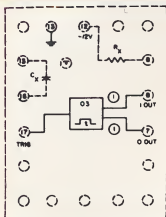
DUAL NAND/AND GATE MM 6211—250Kc: \$40.00
MM 6411— 5Mc: \$55.00

The MM 6211 and the MM 6411 perform the NAND/AND logic function. One section, of each module, is a 5-input gate, followed by an inverter. The second circuit is a 4-input NAND gate followed by an inverter, with an additional diode-buffered output. A most versatile assortment of NAND or AND gating may thus be performed.



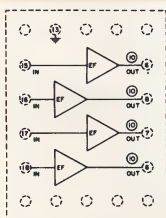
DUAL NOR/OR GATE DTN 6213—250Kc: \$45.00
DTN 6413— 5Mc: \$47.00

The DTN 6213 and the DTN 6413 perform the NOR/OR logic function. Each section of the DTN module is a 5-input NOR gate followed by a single inverter, to provide both the NOR and its complementary, OR, function.



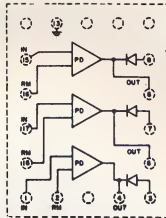
ONE SHOT MULTIVIBRATOR OS 6215—250Kc: \$25.00
OS 6415— 5Mc: \$28.00

The One Shot module provides delays from minimum nominal delay to any desired maximum. OS 6215 and OS 6415 have nominal delay times of 2 microseconds and 0.25 microseconds, respectively. Provision is made for the connection of external capacitors and/or resistors, to provide both coarse and fine variation of the delay.



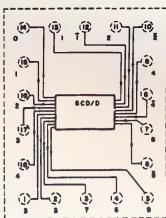
QUADRUPLE COMPLEMENTARY EMITTER FOLLOWER EF 6224—250Kc: \$35.00
EF 6424— 5Mc: \$70.00

The Emitter Follower Facilogic® modules are intended for general driver applications at either the "1" or "0" levels. Each unit consists of four independent complementary drivers, capable of driving 10 Facilogic® modules.



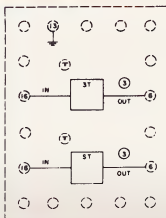
TRIPLE POWER DRIVER PD 6240—250Kc: \$30.00

Triple Power Driver PD 6240 is a direct equivalent of standard Roback Corp. encapsulated logic module PD 240C, except for the inclusion within the module of over-voltage diode protection on the output. This module is intended for driving applications of either relay, resistive, or lamp loads, for any DC voltage up to a -28V maximum, and at any output current from 0-250 ma.



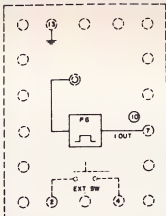
BCD/D CONVERTER MATRIX RM-6241: \$38.00
GRAY/D CONVERTER MATRIX RM-6242: \$38.00

These converters are diode matrices for the conversion of either 8-wire 8-4-2-1 BCD code, or 8-wire gray code into the equivalent decimal format, 10-wire. They accept complementary inputs from any standard Facilogic module, and drive directly into Power Driver PD 6240, or into the Nixie Indicator assembly, NI 6254.



DUAL SCHMITT TRIGGER ST 6252—250Mc: \$27.00
ST 6452— 5Mc: \$40.00

For applications involving the regeneration of signal rise times, the Dual Schmitt Trigger module provide the appropriate logical function. These units may also be used for DC sensing of input levels. Normal trigger point of the Schmitt Trigger is established at -2VDC.



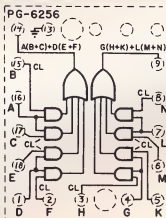
PUSHBUTTON PULSE GENERATOR PB 6253: \$27.00

This Facilogic module provides a convenient method of generating a single pulse or manual command. It includes a conventional spring loaded pushbutton, with necessary delay and integrating circuitry to ensure that only a single output is produced, independent of bounce of the switch contacts. The output of this device conforms to standard Roback Corp. logic levels of zero and -12V, unloaded.



NIXIE INDICATOR ASSEMBLY NI 6254: \$100.00

This module is composed of a Nixie indicator tube for direct decimal indication, and a neon lamp decimal point. The ten drivers for the indicator and driver for the decimal point are all included in a single NI 6254 package. The NI 6254 may be driven directly from RM 6241, RM 6242, or other signal sources.



DUAL PULSE GATE PG 6256—250Kc: \$32.00
PG 6456— 5Mc: \$46.00

The Pulse Gate provides a positive going pulse when any of the four gated clock line inputs are triggered with a "0" to "1" transition. Two separate gate lines provide an AND/OR function between the four clock inputs. The logical function performed is $A(B + C) + D(E + F)$.

POWER SUPPLY

PS 832 12v @ 3 Amp, 12v @ .5 Amp, +170v @ .1 Amp \$285.00

ACCESSORIES

R-1102	Mounting Frame	\$ 125.00	1572-8	8 inch "Piggyback" Test Lead (Yellow)	\$1.60
R-1105	Bench Cabinet	260.00	1572-12	12 inch "Piggyback" Test Lead (Brown)	1.60
S-1110	18-Switch Panel	130.00	1572-24	24 inch "Piggyback" Test Lead (Gray)	1.60
K-6000	Starter Kit	1,075.00 Net	1918	Logic Template	2.40
K-6001	Laboratory Kit	1,750.00 Net	1924	Nixie Socket Assembly	5.00
K-6401	Laboratory Kit	2,000.00 Net			
1572-4	4 inch "Piggyback" Test Lead (Blue)	1.60			

THE ROBACK CORPORATION

H-K MODULE DIVISION

HUNTINGDON VALLEY, PENNSYLVANIA

215 ORchard 6-4000

TWx 215 357-5727

THE ROBACK CORPORATION
HUNTINGDON VALLEY, PA. 19006
PHONE: 215-OR-6-4000

PRICE LIST 5-1
DIGITAL LOGIC MODULES

DESCRIPTION	SERIES "D" DC to 25Kc 0°C to +65°C. ALL SILICON MODEL/PRICE	SERIES 100 DC to 50Kc 0°C to +55°C GERMANIUM MODEL/PRICE	SERIES 200 DC to 250Kc -54°C to +71°C GERMANIUM MODEL/PRICE	SERIES 300S (Soldered) DC to 250/500Kc -25°C to +125°C SILICON MODEL/PRICE	SERIES 300 (Welded) DC to 250/500Kc -25°C to +125°C SILICON MODEL/PRICE	SERIES 400 DC to 5/10Mc -25°C to +65°C GERMANIUM MODEL/PRICE
FLIP FLOP HIGH SPEED COUNTING						FF 402*** \$17.75
FLIP FLOP MULTIPLE INPUT CLOCKED	FF D03 \$ 8.40		FF 203 \$14.56	FF 303S** \$16.68	FF 303** \$25.00	FF 403 \$20.00
FLIP FLOP COUNTER/REGISTER	FF D04 \$ 5.85	FF 104 \$7.20	FF 204 \$ 9.95	FF 304S** \$12.36	FF 304** \$20.00	FF 404 \$16.00
FLIP FLOP REGISTER			FF 205 \$ 6.48	FF 305S \$12.00	FF 305 \$15.00	FF 405 \$13.50
FLIP FLOP UNIVERSAL CLOCKED			FF 206A \$17.00			
CLOCK LOW FREQUENCY		UJ 108 \$18.85				
CRYSTAL OSCILLATOR			CO 209 \$10.00	CO 309S \$13.00	CO 309 \$19.50	CO 409 \$23.00
CLOCK MULTIVIBRATOR			MV 210 \$ 6.72	MV 310S \$ 9.36	MV 310 \$14.00	MV 410 \$12.00
MULTI MODE NAND GATE		MM 111 \$ 4.00	MM 211 \$ 6.00	MM 311S \$ 8.64	MM 311 \$11.00	MM 411 \$13.50
DUAL MULTI MODE NAND GATE	MM D12 \$ 4.95	MM 112 \$ 5.00	MM 212 \$ 8.50	MM 312S \$12.84	MM 312 \$14.50	MM 412 \$16.00
DIODE TRANSISTOR NOR GATE	DTN D13 \$ 7.25		DTN 213 \$ 9.20	DTN 313S \$11.10	DTN 313 \$13.50	DTN 413 \$11.75
DUAL DIODE TRANSISTOR NOR GATE	DTN D14 \$ 6.95		DTN 214 \$11.15			
SINGLE SHOT MULTIVIBRATOR	SS D15 \$ 8.00		SS 215 \$ 9.00	SS 315S \$12.22	SS 315 \$19.50	SS 415 \$14.75
DUAL EMITTER FOLLOWER	EF D21 \$ 5.55		EF 221 \$ 6.50	EF 321S \$ 7.93	EF 321 \$11.75	EF 421 \$ 9.25
DUAL INVERTED EMITTER FOLLOWER			EF 223 \$ 6.95	EF 323S \$21.06		EF 423 \$16.00
COMPLEMENTARY EMITTER FOLLOWER			EF 224 \$ 6.20	EF 324S \$15.60	EF 324 \$18.00	EF 424 \$16.00
QUADRUPLE TWO DIODE AND GATE			DG 232 \$ 8.20	DG 332S \$ 9.75	DG 332 \$13.75	DG 432 \$10.27
QUADRUPLE TWO DIODE OR GATE			DG 233 \$ 8.10	DG 333S \$11.20	DG 333 \$12.00	DG 433 \$ 9.00
POWER DRIVER 125 ma, 12V	PD D40 \$ 5.70		PD 240 \$ 6.60	PD 340S \$ 8.84	PD 340 \$10.50	
POWER DRIVER 250 ma, 28V			PD 240C \$ 7.85	PD 340CS \$20.00		
NIXIE DRIVER			ND 254 \$ 6.40			
NEON DRIVER			ND 255 \$ 6.60			
PULSE GATE			PG 256 \$11.60	PG 356S \$14.82		PG 456 \$17.50
MULTIPLEX SWITCH			MX 260 \$56.00	MX 360S \$60.00		
DIFFERENTIAL AMPLIFIER		DA 161 \$50.00				
UNIVERSAL LOGIC DRIVER			LD 264 \$ 6.25			
SOLENOID DRIVER		SD 162 \$30.00				
NIXIE INDICATOR ASSEMBLY			NI 6254 \$ 98.00			
SCHMITT TRIGGER	ST 8D04 \$ 7.40		ST 8204 \$11.75	ST 8304S \$11.76	ST 8304 \$15.75	ST 8404 \$12.00
RESISTOR MATRIX BCD TO DECIMAL			RM 8421E \$ 9.95			
DIODE MATRIX BCD TO DECIMAL		RM 8421F \$20.00	RM 8421F \$20.00	RM 8421FS \$20.00		RM 8421F \$20.00
RESISTOR MATRIX GRAY TO DECIMAL			RM 8422 \$ 9.95			
DIODE MATRIX GRAY TO DECIMAL			RM 8422A \$19.90			

*500Kc

**250Kc

***10Mc

SOCKETS & HARDWARE

00277	PLUG-IN SOCKET, .8" MODULES	\$ 8.00
00278	PLUG-IN SOCKET, 1.2" MODULES	8.00
1430	DESOLDERING KIT (3 PIECES)	10.00
1918	LOGIC TEMPLATE	2.40
1924	NIXIE SOCKET ASSEMBLY	5.00
7001	VARICON SOLDER PIN CONNECTOR	7.00
7012	VARICON TAPER PIN CONNECTOR	9.00

CARD FRAMES

R-1101	FLEXI-CARD FRAME	\$ 55.00
R-1101C	FLEXI-CARD FRAME, WITH 20 CONNECTORS	155.00
R-1101CT	FLEXI-CARD FRAME, WITH 20 TAPER PIN CONNECTORS	190.00
R-1103	EQUIPMENT DRAWER (WITH SLIDES), LESS FRAMES AND CONNECTORS	200.00
R-1104	EQUIPMENT CHASSIS, LESS CONNECTORS (INCLUDES FRAME)	105.00
R-1104C	EQUIPMENT CHASSIS, WITH 20 CONNECTORS	205.00
R-1104CT	EQUIPMENT CHASSIS, WITH 20 TAPER PIN CONNECTORS	240.00

TAPER PIN LEADS (25/PKG)

03953-1	1 1/2" Brown #16	(25)	\$5.00
01940-1	1 1/2" Brown #22	(25)	5.00
01940-2	2 1/2" Red #22	(25)	5.00
01940-3	3 1/2" Orange #22	(25)	5.00
01940-5	5 1/2" Yellow #22	(25)	5.00
01940-7	7 1/2" Green #22	(25)	5.00
01940-9	9 1/2" Blue #22	(25)	5.00
01940-11	11 1/2" Violet #22	(25)	5.00
01940-13	13 1/2" Gray #22	(25)	5.00
01940-15	15 1/2" White #22	(25)	5.00
01940-16	16 1/2" Black #22	(25)	5.00

POWER SUPPLIES

PS 831	12V: 1.5 AMP, 12V: .15 AMP	\$205.00
PS 832	12V: 3 AMP, 12V: .5 AMP, +170V: .1 AMP	285.00

FLEXI-CARDS (LESS MODULES)

C-1051	GENERAL PURPOSE FLEXI-CARD	\$20.00
C-1052*	BLANK FLEXI-CARD (Use C-1073)	17.00
C-1053	FLEXI-CARD EXTENDER	24.50
C-1054	FLIP FLOP/LOGIC FLEXI-CARD	17.00
C-1055	DRIVER FLEXI-CARD	17.00
C-1056	LOGIC FLEXI-CARD	17.00
C-1057	DELAY AND CLOCK FLEXI-CARD	17.00
C-1058	SHIFT REGISTER FLEXI-CARD	17.00
C-1059*	COUNTER FLEXI-CARD (Use C-1076)	25.00
C-1060	DECIMAL OUTPUT FLEXI-CARD	17.00
C-1061	COMPONENT FLEXI-CARD	17.00
C-1062	INVERTER FLEXI-CARD	17.00
C-1064	GATED REGISTER FLEXI-CARD	17.00
C-1065	MATRIX FLEXI-CARD	20.00
C-1068-1	RELAY CARD, WITH 12V RELAYS	95.00
C-1068-2	RELAY CARD, WITH 28V RELAYS	95.00
C-1069*	DECADE COUNTER FLEXI-CARD (Use C-1076)	25.00
C-1070	MULTIPLEXER FLEXI-CARD	17.00
C-1072	HALF-ADDER FLEXI-CARD	17.00
C-1073	BLANK FLEXI-CARD	15.00
C-1074	ACCUMULATOR FLEXI-CARD	17.00
C-1075	B-1 DIRECTIONAL COUNTER FLEXI-CARD	17.00
C-1076	DECADE COUNTER FLEXI-CARD	17.00

FLEXI-CARDS WITH MODULES MOUNTED

MODULE TYPES AND LOCATIONS TO BE SPECIFIED BY CUSTOMER, ORDER AS FOLLOWS:

C-(CARD TYPE)A-(MODULE)/B-(MODULE)/- - -

Basic Card Price plus Module Prices plus \$4.00 Mounting and Test Charge

*For Replacement Only

DISCOUNT SCHEDULE-SEE PAGE 4

FACILOGIC

DESCRIPTION	DC to 250Kc	DC to 5Mc
	MODEL & PRICE	MODEL & PRICE
BLANK MODULE	XM 6201 \$ 9.00	
FLIP FLOP 250Kc	FF 6203 \$ 27.00	FF 6403 \$35.00
CLOCK MULTIVIBRATOR	MV 6210 \$ 15.00	MV 6410 \$22.00
DUAL NAND/AND GATE	MM 6211 \$ 40.00	MM 6411 \$55.00
DUAL NOR/OR GATE	DTN 6213 \$ 45.00	DTN 6413 \$47.00
ONE SHOT MULTIVIBRATOR	OS 6215 \$ 25.00	OS 6415 \$28.00
QUADRUPLE COMPLEMENTARY EMITTER FOLLOWER	EF 6224 \$ 35.00	EF 6424 \$70.00
TRIPLE POWER DRIVER	PD 6240 \$ 30.00	
BCD/DEC CONVERTER MATRIX	RM 6241 \$ 38.00	
GRAY/DEC CONVERTER MATRIX	RM 6242 \$ 38.00	
DUAL SCHMITT TRIGGER	ST 6252 \$ 27.00	ST 6452 \$40.00
PUSHBUTTON PULSE GENERATOR	PB 6253 \$ 27.00	
NIXIE INDICATOR ASSEMBLY	NI 6254 \$ 98.00	
DUAL PULSE GATE	PG 6256 \$ 32.00	PG 6456 \$46.00

FACILOGIC LEASE-LOAN

You may choose to lease any reasonable quantity of Facilogic equipment, for a minimum period of two months. Leasing charges are computed as follows:

First Month	FREE
Second Month	15% of List Price
Successive Months	5% of List Price

Naturally, the customer will assume full responsibility for equipment damage, determined by The Roback Corp. to be due to negligence or improper usage, in accordance with the standard Roback Corp. warranty and repair policy.

You may apply the total lease charge paid, at any time, during the period of the lease, at full value, against the list price of the equipment.

Equipment will be shipped prepaid by The Roback Corp. and is to be returned prepaid.

POWER SUPPLY

PS 832	12V @ 3 AMP, 12V @ .5 AMP, +170V @ .1 AMP	\$ 285.00
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ACCESSORIES

R-1102A	MOUNTING FRAME	\$ 125.00
R-1105	BENCH CABINET	260.00
S-1110	18-SWITCH PANEL	130.00
1572-4	4 INCH "PIGGYBACK" TEST LEAD (BLUE)	1.60
1572-8	8 INCH "PIGGYBACK" TEST LEAD (YELLOW)	1.60
1572-12	12 INCH "PIGGYBACK" TEST LEAD (BROWN)	1.60
1918	LOGIC TEMPLATE	2.40
1924	NIXIE SOCKET ASSEMBLY	5.00

FACILOGIC KITS

K-6000 STARTER KIT-\$1075.00 NET

1	XM 6201	1	PB 6253	4	PD 6240
2	OS 6215	1	MV 6210	1	R-1102A
4	FF 6203	1	RM 6211	12	1572-4
1	EF 6224	6	MM 6211	15	1572-8
4	PG 6256	1	ST 6252	15	1572-12
3	DTN 6213	4	FF 6403	8	1572-24

K-6001 LABORATORY KIT-\$1750.00 NET

1	XM 6201	1	PB 6253	4	PD 6240
2	OS 6215	1	MV 6210	2	R-1102A
4	FF 6203	1	RM 6241	12	1572-4
1	EF 6224	6	MM 6211	15	1572-8
4	PG 6256	1	ST 6252	15	1572-12
3	DTN 6213	4	FF 6403	8	1572-24
1	PS 832	1	R-1105	1	S-1110

K-6401 5Mc FACILOGIC KIT-\$2000.00 NET

1	XM 6201	1	PB 6253	4	PD 6240
2	OS 6415	1	MV 6410	2	R-1102A
2	EF 6424	1	RM 6241	12	1572-4
3	PG 6456	4	MM 6211	15	1572-8
5	DTN 6413	1	ST 6452	15	1572-12
1	PS 832	8	FF 6403	8	1572-24
		1	R-1105	1	S-1110

INSTRUMENT PRODUCTS

902	20 Channel, Solid State, Low Level, Multiplexer	\$3250.00	S-08971	Remote Readout Display, Model 33, 34, or 35 (factory installed)	\$300.00
The Reporter 33	3 Digit Digital Volt-Ohm Meter	595.00	S-03993	Sample and Hold Input, Model 35 (factory installed)	375.00
The Reporter 34	3 Digit Digital Volt-Ohm Meter	695.00	S-03994	Sample and Hold Input, Model 36 (factory installed)	375.00
The Reporter 35	3 Digit High Speed BCD Analog to Digital Converter	795.00	P-31	Input Probe (all models)	15.00
The Reporter 36	9-Bit Binary Analog to Digital Converter	795.00	R-30	Rack Mount, Model 33 or Model 34	50.00
	Additional Instruction Manuals for Above Instruments	5.00			

DISCOUNT SCHEDULE-SEE PAGE 4

SALES OFFICES

Upper New York State
KLM ASSOCIATES
 Whitesboro, New York
 Area Code 315 RE 6-2450
 Waterville, New York
 Area Code 315-841-4702
 Palmyra, New York
 Area Code 315-597-9776

New York City Area
INSTRUMENTATION SALES COMPANY
 Ridgewood, New Jersey
 Area Code, 201-445-5210
 Long Island
 New York, New York
 Northern New Jersey
 Area Code 212-695-4269

Eastern Pennsylvania
HOLDSWORTH AND COMPANY
 Lansdowne, Pennsylvania 19050
 Area Code 215 MA 6-8300
 Southern New Jersey
 Clifton Heights, Penna. 19018
 Area Code 215 GR 4-5300

Maryland
AERON ASSOCIATES
 Towson, Maryland 21204
 Virginia
 Area Code 301 VA 3-6496
 Washington, D. C.
 Delaware

North Carolina
BEACON ELECTRONIC ASSOCIATES, INC.
 South Carolina
 Maitland, Florida
 Area Code 305 MI 7-3498
 Tennessee
 Fort Lauderdale, Florida
 Area Code 305-564-4298
 Alabama
 Huntsville, Alabama
 Florida
 Area Code 205-536-5065
 Georgia

New Mexico
C. T. CARLBERG AND ASSOCIATES
 Texas, West of Pecos River
 Albuquerque, New Mexico
 Area Code 505-265-1579

Wyoming
R. G. BOWEN COMPANY, INC.
 Utah
 Denver, Colorado 80209
 Colorado
 Area Code 303 RA 2-4641
 Salt Lake City, Utah 84111
 Area Code 801 EM 3-4528

California
INSTRUMENTS FOR MEASUREMENTS
 Arizona
 Hollywood, California 90028
 Nevada
 Area Code 213 HO 9-7294
 Sunnyvale, California
 Area Code 408 RE 6-8680
 Sacramento, California
 Area Code 916 EN 1-7257
 Phoenix, Arizona
 Area Code 602 Enterprise 1252

Minnesota
THE HEIMANN COMPANY, INC.
 North and South Dakota
 Minneapolis, Minnesota 55419
 Nebraska
 Area Code 612-827-5457
 Western Iowa
 Northern Wisconsin

Illinois
LANG, CLAESON AND ASSOCIATES
 Southern Wisconsin
 Chicago, Illinois 60631
 Eastern Iowa
 Area Code 312-774-6310
 Northern Indiana

Michigan
ROBERT MILSK COMPANY
 Detroit, Michigan 48235
 Area Code 313-342-6660

Overseas
ROCKE INTERNATIONAL CORPORATION
 New York, New York 10016
 Area Code 212 MU 9-0200

QUANTITY DISCOUNTS DIGITAL LOGIC AND ACCESSORIES

The discount schedule below may be applied to any combination of items ordered, in any quantities, and will be computed on the total value of each order. Facilogic Kits, and "Lease-Loan" arrangements, are not subject to discount. All prices quoted are FOB Huntingdon Valley, Pa. Terms are Net 30 Days.

DISCOUNT SCHEDULE

TOTAL ORDER:	UNDER \$500	Add 25%
	\$ 500 or Greater	NET
	\$ 5,000 or Greater	5%
	\$10,000 or Greater	10%
	\$20,000 or Greater	15%
MINIMUM ORDER:	\$25.00	

QUANTITY DISCOUNTS INSTRUMENTS

Quoted On Request

GOVERNMENT INSPECTION SCHEDULE

20¢ per module
 Minimum charge \$4.00 per module type
 Maximum charge \$25.00 per module type
 Instrument products \$10.00 per unit

OVERSEAS

ITEMS FOR OVERSEAS EXPORT
 SUBJECT TO 5% HANDLING CHARGE

As part of the process of continuing product improvement, we reserve the right to make changes in specifications or performance, at any time. Prices are subject to change without notice.

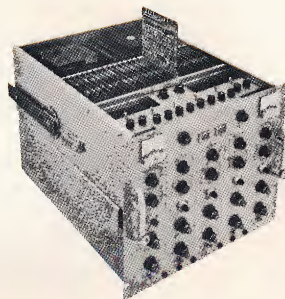
THE ROBACK CORPORATION
HUNTINGDON VALLEY, PENNA. 19006
PHONE: 215- OR-6-4000 TWX 215-357-5727

APRIL 1965
 Printed in U.S.A.
 Price List 5-1

THE ROBACK CORPORATION

DIGITAL SYSTEMS • LOGIC MODULES • INSTRUMENTS • CUSTOM PACKAGING

INSTRUMENTATION
PROCESS CONTROL
DATA LOGGING
DATA ACQUISITION

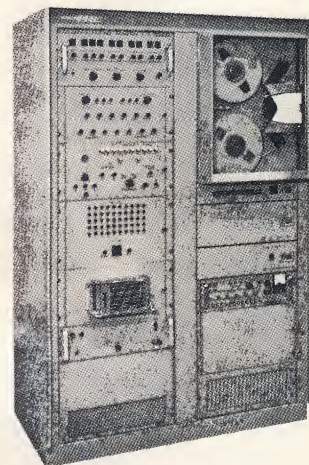


PCM GROUND STATIONS
FORMAT CONVERTERS
PCM BIT SYNCHRONIZERS
PCM SIMULATORS

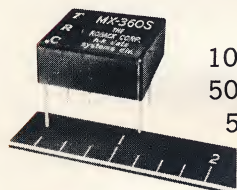
CUSTOMERS

N.A.S.A.	N.A.A.
SANDIA	R.C.A.
I.B.M.	BURROUGHS
G.E.	UNIVAC
LOCKHEED	MARTIN
D.O.D.	BENDIX
ITEK	FOXBORO
LITTON	WESTINGHOUSE
BELL LABS.	UNITED AIRCRAFT

MANY MANY OTHERS

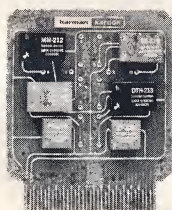


COMPLETE LINE OF LOGIC MODULES

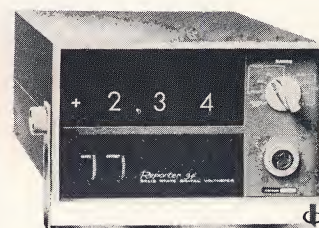


100 KC
500 KC
5 MC

SILICON
GERMANIUM

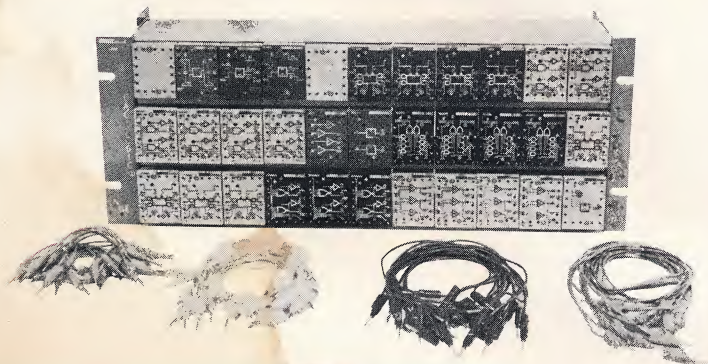


SOLID STATE DIGITAL-VOLT OHM METER

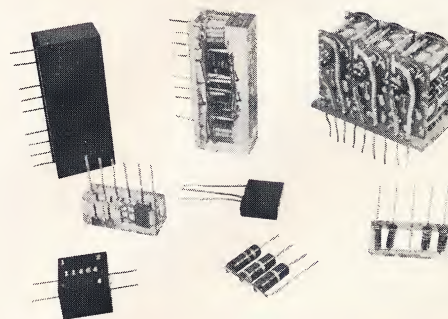


\$595.00

LOGIC TRAINERS



CUSTOMIZED ELECTRONIC PACKAGING



THE ROBACK CORPORATION
HUNTINGDON VALLEY, PENNA. 19006
PHONE: 215-OR-6-4000 TWX 215-357-5727

The Roback Corporation is a broad based electronic organization with products ranging from sub-miniature integrated circuit modules to complex PCM Telemetry Ground Stations. Products include: **DIGITAL LOGIC**—encapsulated with integrated or discrete components (Formerly Harman-Kardon Data Systems Line), Flexicards®, Facilogic® digital breadboards, custom assemblies; **SYSTEMS**—Computer Format Buffer, Data Logging Systems; **PCM TELEMTRY SYSTEMS**—complete ground stations, bit synchronizers, signal conditioners, signal simulators; **TEST INSTRUMENTS**—low cost digital voltmeters, analog to digital converters.

Additional information on standard logic modules, instruments or complete systems will be supplied promptly. Our application engineering department is available for discussion on any digital application.

LOGIC MODULES

- 100 series DC to 50 KC, 0 to +55° C
- 200 series DC to 250 KC, -54° C to +71° C
- 300 series DC to 500 KC, -25° C to +125° C
- 400 series DC to 5MC, -25° C to +65° C

Encapsulated cordwood construction

Solder or welded assembly

Over 70 standard module types including compatible integrated circuits

Color coded

Mil. spec. quality

All series are compatible

FLEXICARDS

24 types of printed circuit cards

Most frequently used combinations:

Shift registers, counters, gated oscillators, bi-directional counters, shift counters, matrix decoders

Mix and mount logic modules on Flexicards to make over 100,000 standard cards. **Delivered from stock.**

FACILOGIC® DIGITAL BREADBOARD SYSTEM

250 KC and 5 MC Facilogic® modules for bread boarding, by plug-in piggy-back patch cords, of Logic Functions.

Built-in indicator lights

Logic diagrams and loading rules on front covers

Mil. spec. symbology

All basic logic configurations

Pre-wired-power busses

Design and bread board with Facilogic®—build with identical circuits in encapsulated form.

CUSTOM ELECTRONIC ASSEMBLIES

Experience and techniques to design, package, and assemble **Custom** electronic packages utilizing fully or partially automated, or manual fabrication techniques including:

- | | |
|------------------------------|----------------------------------|
| welding | integrated electronic assemblies |
| soldering | sub-miniature modules |
| encapsulation | component sub-assemblies |
| micro electronic fabrication | small parts welding |
| cordwood | printed circuit packaging |
| flat pack | photo micrographic analysis |

PCM TELEMTRY GROUND STATIONS

Core memory or patchboard programmed

Input codes: NRZ-C, NRZ-M, NRZ-S, RZ, Bipolar, and Split-phase

1 BPS to 1,000,000 BPS

Bit synchronizer and signal conditioner: 5° clock sync; up to -10db signal to noise ratio

Error rate to within 1 db of theory for any bit rate or code

Variable word length, frame length, sub frame length, and error pattern Complete digital signal simulation

Monitoring options: D to A converters, digital displays, chart recorders

Output options: Buffer storage, computer format, digital magnetic tape.

PCM BIT SYNCHRONIZER AND SIGNAL CONDITIONER

Extracts Pulse Code Modulated Data from NRZ-C, NRZ-M, NRZ-S, RZ, bipolar and split-phase coded data

Bit rates 1BPS to 1,000,000 BPS even on split-phase

Inputs may have up to -10db signal to noise ratio

Digital subloop locks clock to within $\pm 5^\circ$ for entire tracking range; Tracking to $\pm 15\%$; Acquisition up to $\pm 15\%$

Error rate within 1db of theory for any bit rate, code or noise band width.

OPTIONAL: 10 cps to 600 KC 6-pole active Bessel Filter to limit wide band noise or matching premodulation filtering; Remote programming of Code and bit rates.

PCM SIGNAL SIMULATOR

Output codes: NRZ-C, NRZ-M, NRZ-S, RZ, split-phase and bipolar;

Bit rate 1 to 1,000,000 BPS.

Word length 2 to 34 bits, 5 independent words plus cycling counter.

Frame length 2 to 2048 words.

Subframe length 2 to 512 frames.

Super commutation counter 2 to 256.

Parity odd, even or none.

Random code generation.

Blanking (adjustable 10u sec to 1 second) and missing word.

Output filter (10 cps to 630 kc).

Output noise/signal mixer.

Bit error comparison network.

Output voltage amplitude (adjustable 0 to ± 15 volts).

Parallel outputs—34 bits NRZ-C code.

Modular construction including printed circuit card mounted bit pattern switches, size 12¼" high x 19" wide x 23" deep including power supply.

COMPUTER FORMAT BUFFER

Inputs: Parallel synchronous or asynchronous data, serial or parallel time code, pre-programmable identification codes.

Outputs: Computer compatible magnetic tape or buffered outputs for direct computer entry.

Parity checking and generation

Block length: fixed, programmable or automatically variable

Core memory for intermediate storage or programming

Complete digital simulation

Decimal time code and block length display

If block length which has been front panel selected is inadequate for incoming data rate, the Format Buffer will automatically adjust block length to an acceptable length and indicate current block length being recorded.

DIGITAL VOLT-OHM-METER

REPORTER 33

Solid state modular construction

Manually selected ranges: ± 10 , ± 100 , ± 1000 volts; 1K, 10K, 100K, 1000K ohms

Accuracy: Voltage $\pm 0.1\%$ ± 1 count; Resistance $\pm 0.5\%$ ± 1 count

Over voltage sensitivity: Accurate to 110% of full scale

Polarity: Automatic switching and display

Display time: Variable from .2 to 3 seconds

REPORTER 34

Same as Reporter 33 with additional ± 1 volt range

DATA LOGGING SYSTEMS

Input scanning; high speed or low speed with analog data inputs as low as 10MV full scale

Read out; typewriter, punched tape, magnetic tape or buffered for direct input to computer

Sequence, format, and identification; pre-programmable through pin board

System precision; to 5 decimal digits

Scanning rate and logging cycle; independently adjustable, real time recorded as part of scanning cycle

Linearization and conversion to engineering units as well as simultaneous monitoring of all critical variables against individually adjustable high-low limits is optional. (Abnormal reading printed in Red.)

ANALOG TO DIGITAL CONVERTER

REPORTER 35

Solid state modular construction

Manually selected ranges: ± 1 , ± 10 , ± 100 , ± 1000 volts; 1K, 10K, 100K, 1000K ohms

Display: 3 digit high brightness indicator tubes

Speed: 2.5 milliseconds per conversion

Input impedance: 10 megohms

Output: Binary—coded—decimal and sign

REPORTER 36

Same as Model 35 except: Output, Binary 9 bit, plus sign

THE ROBACK CORPORATION

HUNTINGDON VALLEY, PA. 19006

PHONE: 215-OR-6-4000

THE ROBACK CORPORATION

HUNTINGDON VALLEY, PENNSYLVANIA 18006
PHONE: ORCHARD 6-4000 TWX 215-357-5727

Dear Sir:

The Roback Corporation, who recently moved The Harman-Kardon Data Systems Division from Plainview, New York to larger quarters at Huntingdon Valley, Pennsylvania is pleased to send the data you requested.

We now have expanded capabilities for furnishing our Harman-Kardon Data Systems Division product line:

Encapsulated Digital Logic Modules
Logic Trainers-Facilogic
Reporter Digital Volt-Ohm-Meter
Multiplexers
Analog to Digital Converters

All equipment is available from stock.
Of course The Roback Corporation continues to supply:

P.C.M. Telemetry Ground Stations
Bit Synchronizers
Tape Formating Systems
Data Acquisition Systems
Special Purpose Digital Systems

Please do not hesitate to contact us or our local representatives for applications assistance or further information.

Very truly yours,

Victor Schwab

Victor Schwab
Product Sales Manager

bjm

● Systems Division

● Instrument Division

● h-k Module Division

See other side for names and addresses of local sales offices.

NAME _____

FIRM _____

DEPT. _____

CITY _____ STATE _____

This information has been requested for:

☐ Specific Project ☐ Future Project ☐ Files

Product Interest:

☐ Digital Logic Modules ☐ Reporter DVOM ☐ Facilogic
☐ 902/MX-260 ☐ Analog to Digital Converters

Please have your representative contact me:

☐ Telephone ☐ Personal Visit

THE ROBACK CORPORATION
HUNTINGDON VALLEY, PENNSYLVANIA

Phone: OR 6-4000
TWX 215-357-5727